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UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH ADMINISTRATION  
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE  
WASHINGTON 25, D. C.

In cooperation with State, Federal and Other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JUNE 24, 1949  
(Second Cotton Insect Survey Report for 1949)

No shortages of insecticides and dusting equipment for cotton insect control have been reported this season.

No leafworms have been found to date.

The boll weevil situation continues to be serious in Mississippi, Louisiana, Arkansas, Alabama, Georgia, South Carolina, and North Carolina. Insecticides are now being used in all of the above States for boll weevil control.

Excerpts from the Weekly Cotton Weather Bulletin issued by the Weather Bureau, U. S. Department of Commerce, New Orleans, Louisiana, June 21, 1949:

OKLAHOMA: Cotton more advanced east, weather becoming more favorable for checking weevils, some damage early squares, extensive poisoning.

ARKANSAS: Weather favorable for weevil activity.

MISSISSIPPI: Weather favorable for weevils with many complaints.

ALABAMA: Favorable for weevils, heavy infestation, some poisoning.

GEORGIA: Weather favorable for weevils.

SOUTH CAROLINA: Weather very favorable for weevils, heavy infestation, poisoning active.

ARIZONA: Some bollworms Pima County.

CALIFORNIA: San Joaquin cotton, spraying, dusting for pest control continues.

TEXAS, LOUISIANA, TENNESSEE, NORTH CAROLINA, MISSOURI, NEW MEXICO: No mention about cotton insects.

THE TEXAS WEEKLY CROP AND WEATHER BULLETIN, Austin, Texas, June 14, 1949 states: "Widespread but moderate infestations of insects were reported."

On June 21, 1949 it states: "Grasshopper infestations were quite heavy in north-central and northwest areas and poisoning was widespread."

BOLL WEEVIL

NORTH CAROLINA: Boll weevils were found in 58 of the 80 fields examined in 16 counties. In the 31 fields where square examinations were made 29 were infested. Twelve fields with more than 25% of the squares punctured were found in Cumberland, Edgecombe, Greene, Harnett, and Sampson Counties. A year ago at this time no fields had been reported with as many as 25% of the squares punctured.



SOUTH CAROLINA: Boll weevils are continuing to emerge from hibernation but at a reduced rate. Only 6 weevils emerged from the hibernation cages at Florence this week as compared with 50 the previous week. A total of 498 weevils have been removed from the cages to date as compared with 8 in 1948, 147 in 1947, and 91 in 1946.

A total of 126 weevils were collected in the one-fifth acre trap plot of cotton as compared with 244 the previous week. To date, 1394 weevils have been collected in the trap plot. The trap plot records as compared with other years are as follows:

<u>Year</u>	<u>Weevils Collected</u>	<u>Year</u>	<u>Weevils Collected</u>
1949	1394	1943	518
1948	418	1942	545
1947	1046	1941	1115
1946	365	1940	55
1945	562	1939	741
1944	150	1938	380

The average infestation in 78 fields in 16 counties was 35% punctured squares as compared with 13% during the same week in 1948 and 25% in 1947. Weevils were found in all fields examined. In 15 fields the infestation ranged from 11 to 25%; in 52 fields from 26 to 50%; and in 11 fields more than 50% of the squares were punctured.

In 26 fields in Barnwell County which have received two or more applications of poison the infestation is 0.65% punctured squares indicating good control. In 5 undusted fields in the same area the infestation averaged 20%. The first generation of weevils have already begun to emerge. The first positive record was for June 20. (J. W. Watts, June 25, 1949)

GEORGIA: In the examination of 271 cotton fields in 79 counties boll weevils were found in all but eight fields in Appling, Berrien, Coffee, Cook, Franklin, Irwin, Meriwether, and Ware Counties. Fields with 50% or more of the squares punctured by weevils were reported from 24 counties, Appling, Atkinson, Bulloch, Burke, Carroll, Cook, Dodge, Dooly, Emanuel, Franklin, Harris, Heard, Houston, Laurens, Marion, Meriwether, Morgan, Pulaski, Telfair, Terrell, Walton, Washington, Wheeler, and Wilcox. Reports indicate that many farmers in the southern part of Georgia have been holding the weevils in check by the use of insecticides.

ALABAMA: Boll weevils were found in 34 of the 40 fields examined in Butler, Conecuh, Covington, Crenshaw, and Escambia Counties during the week ending June 17. In Butler County the infestations ranged from 25 to 90% punctured squares. Fields with more than 50% punctured squares were found in Conecuh and Covington Counties.

MISSISSIPPI: Clay Lyle, Entomologist, reported on June 27: "The boll weevil situation in Mississippi could hardly be worse, based on reports received from State Plant Board inspectors and federal entomologists who examined 374 fields in 52 counties during the past week, finding weevils on 338 or 90 percent of all farms as compared to only 41% on this date last year. The average square infestation in 271 fields of older cotton was 30% compared with 25% last week and 13% at this time last year. In 67 fields not yet squaring weevils averaged 346 per acre.

"The Delta and Pine Land Company in Bolivar County also reported 198 out of 201 other fields had an average of 25% infestation with 87 fields ranging from 26% to 70% punctured.

"A new crop of weevils is now emerging in the older cotton and poisoning should be started at once on all cotton 18 inches high or taller where 25% of the squares are punctured."

In the Delta Counties the boll weevil situation is more serious than during any June since the cotton insect research laboratory was established at Stoneville in 1934. Of 197 Delta fields examined 171 were found infested with weevils. On this date in 1948 only 68 were infested out of 296 inspected.

Fields with more than 50% of the squares punctured were reported from 18 counties, Attala, Chickasaw, Choctaw, Clay, Coahoma, Holmes, Jasper, Lauderdale, Leake, Lee, Lowndes, Monroe, Newton, Panola, Tunica, Washington, Winston, and Yazoo.

LOUISIANA: Boll weevil infestation counts made in 187 fields in 17 parishes averaged 13% punctured squares, as compared to 6% in 1948, 17% in 1946, 10% in 1944 and 1943. No records were made during this period in 1947 and 1945. Weevils were found in 162 of the fields examined. In 84 of the fields the infestation was less than 10%; in 46 fields from 11 to 25%; in 23 fields from 26 to 50%; and in 9 fields more than 50% of the squares were punctured.

Boll weevils continue to emerge from the hibernation cages at Tallulah. The emergence from May 1 to June 24 as compared to past years is as follows:

Year	Boll Weevil Survival in Hibernation Cages from May 1 to June 24	Year	Boll Weevil Survival in Hibernation Cages from May 1 to June 24
1949	4.04	1940	.02*
1948	.38*	1939	1.94*
1947	1.68	1938	.76*
1946	9.04	1937	17.38
1945	14.52	1936	.12*
1944	2.16	1935	.48*
1943	.94	1934	4.24*
1942	.08*	1933	.42
1941	16.30	1932	13.48

\*Emergence completed

ARKANSAS: Cotton is late in the southeastern section of the State and it was necessary to make plant examinations for boll weevils in approximately two-thirds of the fields inspected during the week. Weevils were found in 24 of 31 fields inspected at an average rate of 362 per acre. Square infestation counts were made in 15 fields in this area (Ashley, Chicot, and Desha Counties) and all were infested at an average rate of 42% as compared with 6% during the same week in 1948. The infestation ranged from 11 to 25% in 3 fields; from 26 to 50% in 7 fields; and over 50% in 5 fields.

In southwestern Arkansas, boll weevils were found at an average rate of 232 per acre in 3 fields in 2 counties. In 10 fields in Lafayette, Little River, and Miller Counties, the infestation averaged 40% punctured squares. The infestation ranged from 11 to 25% in 3 fields; from 26 to 50% in 5 fields; and in 2 fields more than 50% of the squares were punctured.



TEXAS: Boll weevil infestation in general continues low in most areas of the State. Plant examinations made in 130 fields in 19 counties in central, north-central and northwestern areas averaged 13 weevils per acre. Square infestation counts made in 417 fields in 28 counties in north-central, central and other areas averaged 6%. No punctured squares were found in 221 of the fields examined. In 125 fields less than 10% of the squares were punctured; in 41 fields from 11 to 25%; in 25 fields from 26 to 50%; and in only 5 fields were more than 50% of the squares punctured.

OKLAHOMA: "During the week 109 fields were examined for boll weevils and other cotton insects. Forty-eight of these fields examined were in eastern Oklahoma and 61 in central and western Oklahoma. Of the 61 fields examined in central and western Oklahoma, infestations were found in only 10, thus being very light. Of the 48 fields examined in eastern Oklahoma 38 were found to be infested. Square infestation counts were made in Bryan, Choctaw, and McCurtain Counties.

"The situation in McCurtain County, insofar as boll weevils are concerned, appears to be quite serious at the present time. Ten fields were examined and all 10 were found infested. A few fields, where the squares were not numerous enough to be punctured, were found infested with adult weevils. In 8 fields, where there were sufficient squares to make infestation counts, the infestation ranged from 22 to 69%." (C. F. Stiles, June 25, 1949)

#### BOLLWORM

TEXAS: Herman S. Mayeux in Cotton Insect Survey Report No. 12 from the Lower Rio Grande Valley that was issued on June 23, 1949 states: "The bollworm outbreak, perhaps the heaviest in the history of the Lower Rio Grande Valley Counties, enters its fourth week. There was a definite increase during the week ending Wednesday, June 22. Infestations are heavy and widespread, especially in Willacy County and around Mercedes in Hidalgo. Spotted, localized infestations extend over the entire Valley area."

#### COTTON FLEAHOPPER

ARKANSAS: In 13 fields examined for cotton fleahoppers in 3 southwestern counties, 10 were infested at an average rate of 6 fleahoppers per 100 terminals. Sweepings made in these fields ranged from 2 to 24 fleahoppers per 100 sweeps. In 8 fields examined in 4 southeastern counties, all were infested at an average rate of 8 fleahoppers per 100 terminals. Sweepings made in the same fields ranged from 1 to 10 fleahoppers per 100 sweeps.

TEXAS: There was only a slight increase in fleahopper infestation during the past week in McLennan and Falls Counties. Infestations are high enough to justify control measures in a few fields. Some fields which were infested by thrips earlier and are now infested with fleahoppers are practically devoid of fruit.

OKLAHOMA: Cotton fleahopper infestation is increasing in the central and western part of the State. Fleahoppers are beginning to appear in damaging numbers in Caddo County. In 3 fields fleahoppers were found at the rate of 23, 24, and 27 per 100 terminals.

MISSISSIPPI: Cotton fleahoppers were reported in 36 fields in the Delta.

GEORGIA: Some cotton fleahopper injury was reported in a few counties in the Piedmont area.

### MISCELLANEOUS INSECTS

TEXAS: Most of the earlier cotton is now showing recovery from thrip injury. Late planted fields continue to be injured by this insect.

Grasshoppers continue to cause damage along the edges of many cotton fields and other row crops in central Texas.

During May lepidopterous larvae collected on cotton that were submitted for determination included the variegated cutworm, Peridroma margaritosa (Haw.), and the yellow-striped armyworm or the cotton boll cutworm, Prodenia ornithogalli (Guen.) from Falls County and the salt-marsh caterpillar, Estigmene acrea (Drury), from McLennan County. The salt-marsh caterpillar was reported ragging cotton fields in Cameron County during June. Aphids collected from cotton in Falls and McLennan Counties during May were determined as the cotton aphid, Aphis gossypii Glov., and the cowpea aphid, Aphis medicaginis Koch.

OKLAHOMA: Grasshoppers are reaching the adult stage and are present in damaging numbers around the edges of many cotton fields in several southwestern counties. In the margin of one field in Comanche County hoppers averaged 20 per square yard.

MISSISSIPPI: Tarnished plant bugs were reported in 44 Delta fields and rapid plant bugs were reported in 39 fields.

ALABAMA: The rapid plant bug, Adelphocoris rapidus (Say), and the tarnished plant bug, Lygus oblineatus (Say), were observed in cotton fields in Escambia, Conecuh and Covington Counties. Cutworms defoliated one and one-half acres of cotton in a 25 acre field in Conecuh County. Light infestations of aphids occurred but they were not noted in all fields. (Calvin M. Jones, June 17, 1949)

SOUTH CAROLINA: More root lice injury noted in Dorchester and Colleton Counties than in any other area in the State to date. Many fields have spots of various sizes where the stand has been completely killed. The species concerned was mostly Trifidaphis phaseoli. (J. W. Watts, June 11, 1949)

GEORGIA: The elongate flea beetle, Systema elongata (F.), caused serious damage to cotton near Marshallville, Macon County, in central Georgia during late May and early June. The observations and collections were made by representatives of the Division of Domestic Plant Quarantines who are engaged in white-fringed beetle control work in Georgia. The flea beetles were skeletonizing leaves of cotton and there was about 50% loss of stand on 3 or 4 acres in 15-acre field. It was reported that the flea beetles were killed by the application of a commercial insecticide dust containing 3% gamma benzene hexachloride, 5% DDT, and 40% sulfur. This field and a large adjacent area has been "laying out" for several years and the areas where the outbreak was noted were covered with a heavy growth of ragweed and smartweed in 1948.

### BOLL WEEVIL

TENNESSEE: Dr. J. O. Andes of the Extension Service reported on June 11, 1949 that boll weevils had been noted in Hardeman County on June 4 and 7. This is earlier than they are usually noted in Tennessee.

PREPARED JUNE 30, 1949



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